Washington Department of Wildlife

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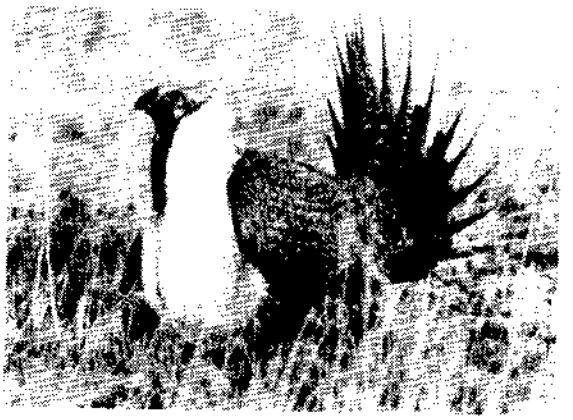


SAGE GROUSE *(Centrocerus urophasianus)*

Range

Sage grouse were historically distributed throughout the northwestern United States and southern Canada, closely following the distribution of big sagebrush. Currently they are found in parts of Washington, Oregon, Idaho, Montana, Alberta, Saskatchewan, North Dakota, California, Neveda, Utah, Colorado and Nebraska.

Washington Distribution

In Washington, they are found in shrub-steppe habitats east of the Cascade Mountains (Grant, Douglas, Lincoln, Yakima, Benton, and Kittitas counties).

Habitat Requirements

Sage grouse require year-round access to sagebrush (Artemisia sp.) for food, nesting and cover. They typically occur where slopes are less than 30 percent, although they are occasionally found on steeper slopes.

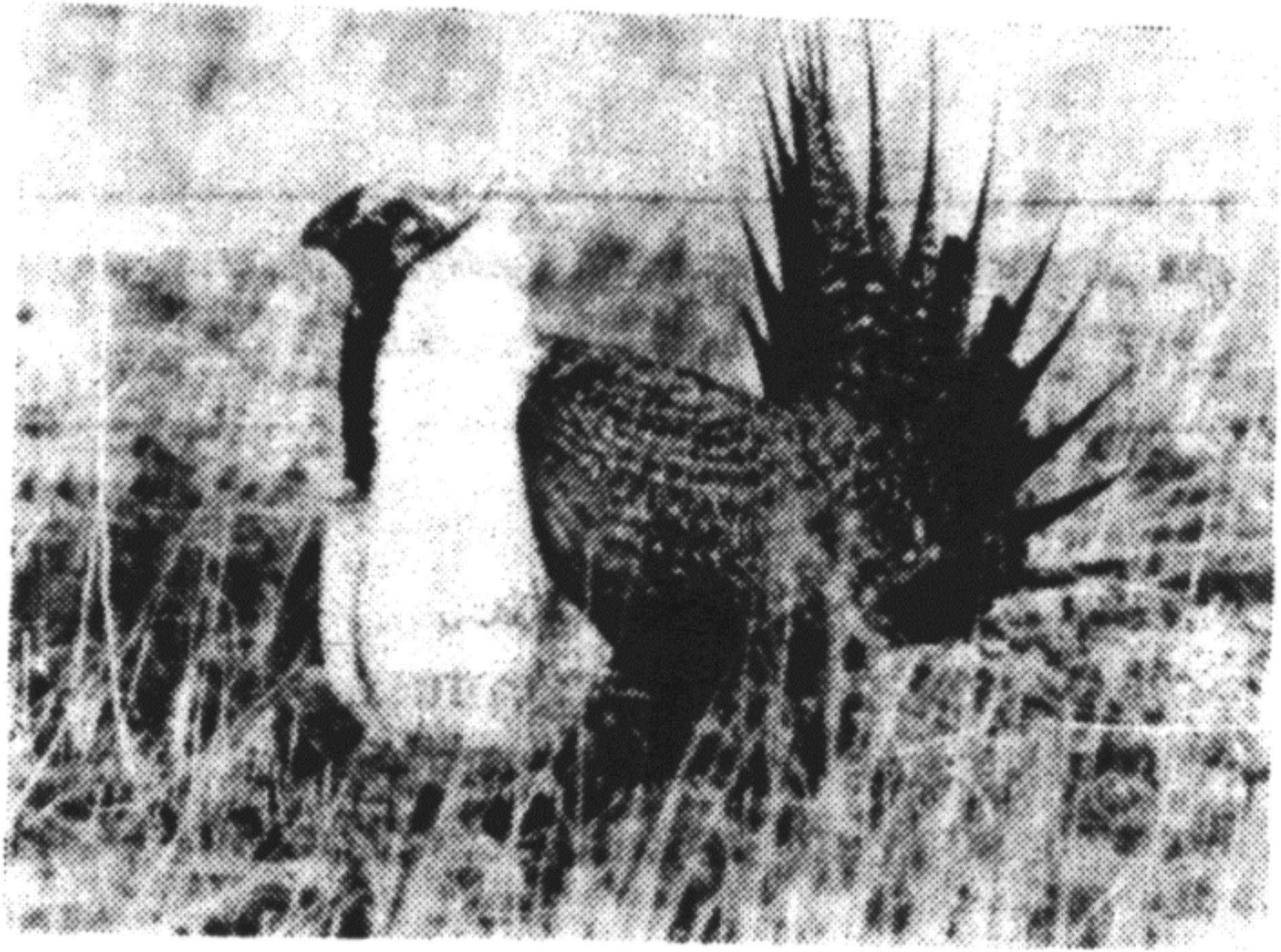
Sage grouse move throughout their range and utilize different components of the habitat according to an annual cycle. Males arrive at traditional breeding grounds (called leks) in late February, followed by females a few weeks later. Leks are usually small open sites such as meadows, low sage zones, roads, grassy swales, cultivated or natural fields, or disturbance areas created by livestock. The open areas usually range from 1/10 to 10 acres in size, but may be as large as 100 acres. Leks are often located on, or within, one or two miles of the winter range.

Dense sagebrush usually surrounds sage grouse leks. Male grouse move to the sagebrush during the day to loaf, roost, and feed. Distance travelled from the staging ground ranges from less than 0.5 mile up to three miles. Optimum loafing sites are found along stream bottoms, ravines and draws.

Sage grouse egg laying begins about mid-April and may continue until mid-May; hatching varies from the last week of May through July. Hens construct nests beneath or between sagebrush plants, usually within two miles of a lek. The quality of nesting habitat surrounding the lek is an important factor in population success. Sagebrush stands with 20 to 40 percent canopy cover and 24-inch height, with residual grass cover, have greatest nesting success.

Juvenile sage grouse survival is significantly higher in areas with robust sagebrush-grass production and where forbs (broad-leaved herbaceous plants) are a common component of the spring range. Under these conditions, the brood moves less, reducing exposure to predation and conserving energy. Insects, especially beetles and ants, are important foods for young sage grouse. However, succulent forbs become increasingly important as the chicks mature, and the availability of forbs apparently influences the movements of hens and broods.

Where spring and summer ranges are dry, sage grouse will move to moderately moist areas that support forbs. Low-elevation native or irrigated meadows, stream bottoms, or high-elevation drainages and



meadows may be selected. Sparse, low-growing sagebrush stands located within two miles of feeding sites are used for cover and roosting.

Habitat use switches from meadows and drainages to stands of sagebrush in winter. Sage grouse rely almost entirely on the leaves of sagebrush for food during winter. Areas of greatest available canopy cover receive the most use; at least 15 percent sagebrush canopy cover is apparently required by sage grouse for winter habitat.

Limiting Factors

Sage grouse are limited by the availability of sagebrush stands interspersed with small openings and moderately moist, forb-producing areas.

Management Recommendations

Sage grouse depend upon sagebrush stands for nesting, food and cover. In order to maintain sage grouse populations, sagebrush communities must be left in a reasonably undisturbed condition. Sagebrush removal or alteration should not occur in areas known to support wintering populations of sage grouse. Sagebrush control should not occur where live sagebrush cover is less than 20 percent, or on upper slopes over 20 percent gradient with shallow soils where sagebrush is less than 12 inches tall.

In other areas, where sagebrush alteration is unavoidable, brush removal should be confined to irregular strips less than 100 ft. wide of patches less than 300 yds. in circumference. Such strips should be alternated with undisturbed strips of sagebrush at least as wide as treated areas, and preferably at right angles to the prevailing wind or the slope of the land.

An alternative technique for sagebrush control is partial kill of the brush. Partial kill leaves some sagebrush and forbs available to the grouse. This technique also helps to retain snow and moisture during spring, creating better growing conditions for forbs and grasses later in the season.

Spring- and summer-use areas should be managed to provide for all components of the habitat required by sage grouse. Structure and density should differ among sagebrush stands (e.g. low, sparse stands should be interspersed among high dense stands). However, within sagebrush stands, structure and density should be managed to maintain more homogeneous characteristics. Additional cover types, such as open areas and meadows, should be interspersed in close proximity (450'-600') to sagebrush stands. Important forb-producing areas should be preserved where sage grouse occur, with live sagebrush strips 600' wide, retained around the edges of these areas.

Sage grouse feed primarily on sagebrush during the early part of the mating season, and may abandon a lek if adequate food is not available within at least one mile. Adequate cover surrounding the lek is also required by the birds. Consequently, sagebrush should not be removed or disturbed within a radius of at least two miles surrounding leks.

Minor amounts of disturbance may cause hen sage grouse to abandon their nests during egg-laying. Therefore, human activities, and other activities such as livestock drives, should not occur within a radius of two miles around leks or other known nesting areas from mid-April to early June.

Spraying of pesticides that reduce insect populations or shrub/forb cover is detrimental to sage grouse populations. If spraying is unavoidable, control programs should be scheduled to avoid the nesting and brooding season, from late mid-April through August. Spraying should be avoided on adjacent lands if these chemicals might drift into sage grouse habitat. Spray should not be applied when wind velocity exceeds six miles/hr.

Livestock grazing may be used to help maintain sage grouse habitat under certain conditions. Light grazing (less than 30 percent of current year's growth) may benefit grouse in winter by uncovering sagebrush plants. Sheep grazing should not occur until after June 1 to avoid sage grouse nest abandonment. Cattle grazing should be monitored in sage grouse nesting and summering areas to ensure that at least 50 percent of the annual herbaceous cover is protected prior to mid-September. Increased grazing after this date will not be detrimental.